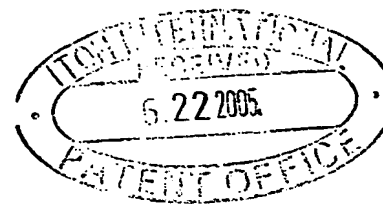


PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

To: ITOH, Tadahiko 32nd Floor, Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 1506032 Japan

Date of mailing (day/month/year)	21.6.2005
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Applicant's or agent's file reference R04316PCT	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2005/003827	International filing date (day/month/year) 01.03.2005	Priority date (day/month/year) 01.03.2004
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International Patent Classification (IPC) or both national classification and IPC Int.Cl. ⁷ H02J7/00, H01M10/44

Applicant RICOH COMPANY, LTD.

<p>1. This opinion contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">Box No. I</td> <td>Basis of the opinion</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>2. FURTHER ACTION</p> <p>If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p> <p>3. For further details, see notes to Form PCT/ISA/220.</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																						

Date of completion of this opinion 08.06.2005	
Name and mailing address of the ISA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer ISAO YOSHIMURA Telephone No. +81-3-3581-1101 Ext. 3568

WRITTEN OPINION OF THE
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PCT/JP2005/003827

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2, 4-11	YES
	Claims	1, 3	NO
Inventive step (IS)	Claims	2, 9, 11	YES
	Claims	1, 3-8, 10	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

D1: JP 10-225001 A (MITSUBISHI ELECTRIC CO., LTD.)
1998.08.21, [0008]-[0016], Fig. 1, 2

D2: JP 2002-010505 A (FUJI ELECTRIC CO., LTD.)
2002.01.11, [0035]-[0038], Fig. 4

D3: JP 2003-348763 A (MITSUMI ELECTRIC CO., LTD.)
2003.12.05, [0006]-[0010], Fig. 1, 2

The subject matter of claims 1, 3 does not meet the requirement of novelty. D1 discloses a battery connection detection circuit comprising a determination circuit that judges from operation states of a constant voltage circuit and a constant current circuit.

The subject matter of claims 4-8 does not involve an inventive step over D1 in view of D2, D3.

It would be easily conceived by the person skilled in the art to substitute the constant voltage circuit and the constant current circuit in D2 or D3 for the constant voltage circuit and the constant current circuit in D1. And, it is generally known to the person skilled in the art that a MOS transistor is interchangeable with a bipolar transistor where circumstances make it desirable.

The subject matter of claim 10 does not involve an inventive step over D1. Integrating some circuits in one IC is generally known to the person skilled in the art.

The subject matter of claims 2, 9, 11 is neither disclosed in any of the documents cited in the ISR nor obvious to the person skilled in the art.